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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,431	03/19/2001	Hermanus G Grobberhaar	00771.00016	1097
22907	7590	05/20/2004	EXAMINER	
BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			TRAN, HIEN THI	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,431

Applicant(s)

GROBBENHAAR, HERMANUS G

Examiner

Hien Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/19/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "5A, 5B, 6A, 6B" (Figs. 5-6). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the drawings to comply with CFR 1.84(p)(5), e.g. they should include the reference sign(s) mentioned in the specification and vice versa.

Specification

3. The disclosure is objected to because of the following informalities:
On page 2, line 24, reference to claims 2 and 3 is improper and should be deleted.
Appropriate correction is required.
4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 4, 8-13, 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, it is unclear as to what is intended by a narrow gap and where it is shown in the drawings. See claims 12-13 likewise.

In claim 8, it is unclear and confused as to what structural limitation applicant is attempting to recite; in line 5 it is unclear as to what is intended by "possible"; in lines 6-8 it is unclear as to whether the conical connecting piece is the same as to the first connecting piece set forth in claim 1 and how it is related to the first exhaust section. See claims 9, 18-19 likewise.

In claim 9, lines 3-4 it is unclear as to how the sealing ring 16 is related to the connection 16 set forth in claim 8.

In claim 10, it is unclear and confused as to what structural limitation applicant is attempting to recite and in line 8 it is unclear as to what is intended by "normal position" and also the normal position lacks positive antecedent basis. See claim 20 likewise.

In claim 11, lines 3-4 "the spacer element" lacks positive antecedent basis.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-3, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Weber et al (5,365,735).

With respect to claims 1-2, Weber et al discloses a catalytic converter unit received between a first and a second exhaust section of an exhaust of an internal combustion engine, wherein the first exhaust section is fit for connection to said internal combustion engine, comprising:

a catalytic converter housing 30;

a catalytic converter element 32 arranged in the catalytic converter housing;

a first connecting piece arranged between a first exhaust section and the catalytic converter housing 30; and

a second connecting piece arranged between the second exhaust section and the catalytic converter housing 30,

wherein the first exhaust section comprises at least two channels 8, 10 of substantially equal cross-section, the first exhaust section is separated by a first separating element 28,

the catalytic converter element is divided in longitudinal direction into a number of parts 34a, 34b corresponding with the number of channels, which parts 34a, 34b are separated by at least a second separating element 48 aligned relative to the first separating element 28,

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characterized in that the second separating element 48 extends from the catalytic converter element 34a, 34b at the side of the first exhaust section into the first connecting piece.

With respect to claim 3, Weber et al discloses that the first exhaust section comprises an internal channel and two external channels of substantially C-shaped cross-section, wherein the cross-section of the C-shaped channels substantially equals double the cross-section of the internal channel, that the second separating element has a corresponding cross-section and that the catalytic converter element is divided into corresponding parts.

With respect to claim 10, the first separating element 28 is thickened.

Instant claims 1-3, 10 structurally read on the apparatus of Weber et al.

10. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kruse (GB 2,320,692).

With respect to claim 1, Kruse discloses a catalytic converter unit received between a first and a second exhaust section of an exhaust of an internal combustion engine, wherein the first exhaust section is fit for connection to said internal combustion engine, comprising:

- a catalytic converter housing 5;
- a catalytic converter element 3 arranged in the catalytic converter housing;
- a first connecting piece arranged between a first exhaust section and the catalytic converter housing 5; and
- a second connecting piece arranged between the second exhaust section and the catalytic converter housing 5,

wherein the first exhaust section comprises at least two channels 6, 7 of substantially equal cross-section, the first exhaust section is separated by a first separating element,

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the catalytic converter element 3 is divided in longitudinal direction into a number of parts 1, 2 corresponding with the number of channels 6, 7, which parts 1, 2 are separated by at least a second separating element 4 aligned relative to the first separating element,

characterized in that the second separating element 4 extends from the catalytic converter element 1, 2 at the side of the first exhaust section into the first connecting piece.

Instant claim 1 structurally read on the apparatus of Kruse.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by

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applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

14. Claims 5-7, 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al (5,365,735) or Kruse (GB 2,320,692) in view of Otani et al (4,413,392).

The apparatus of Weber et al or Kruse is substantially the same as that of the instant claims, but fails to disclose whether the catalytic converter element may be divided in transverse direction into at least two sections and also lacks a mat or spacer element.

However, Otani et al discloses a catalytic converter having two catalytic converter element sections and a mat located between the housing and the catalytic converter element sections.

It would have been obvious to one having ordinary skill in the art to provide more than one catalytic converter element section as taught by Otani et al in the apparatus of either Weber et al or Kruse for further purifying the exhaust thereof.

It would have been obvious to one having ordinary skill in the art to provide a mat between the between the housing and the catalytic converter element sections as taught by Otani et al in the apparatus of either Weber et al or Kruse for holding the catalyst element section in place as well as providing insulating thereof.

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15. Claims 4, 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al (5,365,735) in view of Suzuki (4,261,170).

Suzuki discloses provision of a gap between the first separating element and the catalyst converter element.

It would have been an obvious matter of design choice to one having ordinary skill in the art to alternately provide a gap as taught by Suzuki in the apparatus of Weber et al provided that it still separates the exhaust flows thereof since such a modification would have involved a mere substitution of known equivalent structures. A substitution of known equivalent structures is generally recognized as being within the level of ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423 (CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

16. Claims 8-9, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al (5,365,735) in view of Hall (1,188,784).

Hall discloses the conventionality of providing a housing having a seam fold 18, a conical connecting piece 13 and a gap therebetween.

It would have been obvious to one having ordinary skill in the art to provide a housing with a specific connection as taught by Hall in the apparatus of Weber on the basis of its suitability for the intended use as a matter of obvious design choice and since such a modification would have involved a mere substitution of known equivalent structures. A substitution of known equivalent structures is generally recognized as being within the level of ordinary skill in the art. *In re Fout* 213 USPQ 532 (CCPA 1982); *In re Susi* 169 USPQ 423

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(CCPA 1971); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *In re Ruff* 118 USPQ 343 (CCPA 1958).

17. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al (5,365,735) in view of Otani et al (4,413,392) and Hall (1,188,784).

The same comments with respect to Otani et al and Hall apply.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is (571) 272-1454. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hien Tran

Hien Tran
Primary Examiner
Art Unit 1764

HT
May 17, 2004